

KHAILOV, K. F.

sting industrial pipelines Moskva, Gos-toptekhizdat, 1949. 22 p. (Biuro tekhniko-
onomicheskoi informatsii TSIMTnefti. Obmen otechestvennym ogytom: Dobycha)

930.M5

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5

MIKHAYLOV, Konstantin Fedorovich; SHEVCHUK, Yu.I., redaktor; UDALYY, A.M.,
Vedushchiy redaktor

[Deep oil well pump repair mechanic] Slesar' po remontu glubinnykh
nasosov. Baku, Aznefteizdat, 1954. 166 p. [Microfilm] (MLRA 10:4)
(Oil well pumps--Repairing)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5"

Mikhaylov, K.F., YUDOLOVICH, M.Ye.

Installation and Repair of Petroleum Industry Equipment. Gosoptekhizdat, 1956, 431 p, price: rubles 11.30. Admitted by the Board of Control of teaching Institutions of the Ministry of the Oil Industry of USSR as a textbook aid for petroleum technical schools. In book is exposed in detail the technical repair of drilling and oil-trade equipment with the application of efficient methods of work organization. Book may also be useful for drill bureau mechanics and workers in the trade.

So: A- 3080689

GONTA, Timofey Timofeyevich; GOREV, Nikolay Alekseyevich; KLITOCHENKO,
Ivan Filippovich; MIKHAYLOV, Konstantin Fedorovich; DUBROVINA, N.D.,
vedushchiy red.; MUKHINA, E.A., tekhn.red.

[Petroleum and natural gas in the Ukraine] Neft' i prirodnyi gaz
Ukrainy. Moskva, Gos.nauchno-tekhn. izd-vo neft. i gorno-toplivnoi
lit-ry, 1957. 78 p. (MIRA 11:1)
(Ukraine--Petroleum) (Ukraine--Gas, Natural)

MIKHAYLOV, K.P.

New type of pipe. Neftianik 2 no.5:19-20 My '57. (MLRA 10:5)

1. Nachal'nik ottdela dobychi ob"yedineniya Ukrneft".
(Petroleum--Pipe lines) (Pipe, Steel)

Mikhaylov, K.F.

AUTHOR:

Mikhaylov, K.F.

93-57-7-19/22

TITLE:

An Experiment in Pressure Maintenance at Radchenkovo Oilfield (Opty raboty po podderzhaniyu davleniya na mestorozhdenii Radchenkovo)

PERIODICAL: Neftyanoye khozyaystvo, 1957 Nr 7, pp 62-66 (USSR)

ABSTRACT:

The new Radchenkovo oilfield is under the Radchenkovo Petroleum Production Administration (NPU Radchenkovo) in Poltavskaya Oblast' and belongs to the Association of the Ukrainian Petroleum Industry (Ukrneft'). Exploitation of the 4KA and 2KG formations of this oilfield began in 1950 and 1953 respectively. The formations operated under natural pressure for several years but the yield began to decrease with the increasing gas factor. In order to build up or at least maintain the pressure of the formations, Ukrneft' resolved to resort to gas injection.

Card 1/3

An Experiment in Pressure (Cont.)

93-57 7-19/22

Gas injection well 37 was selected to serve the 2KG formation. In this formation the pore space created by the removal of fluid and gas amounted in terms of formation pressure to 120 000 cu. m. Since gas-injection well 37 operation at 50 percent of its capacity can receive up to 2 000 cu. m. of gas per day, it will take 2 1/2 to 3 months to build up pressure in the 2KG formation. The pore space created by the removal of fluid and gas from the 4KA formation amounted to about 145,000 cu. m. so that the process of building up pressure in this formation at the injection rate of 2,000 cu. m. of compressed gas per day will take, under favorable conditions 3 to 3 1/2 months. Fig. 1 shows the distribution of the gas injection wells for the two formations. Fig. 2 shows the state of the 2 KG formation before and after gas injection. Fig. 3 shows the pressure distribution and Fig. 4 the state of the 4KA formation before and after gas injection. The author concludes that 1) gas injection has increased the yield of the formations, 2) the gas should be injected in the 4KA formation through the northwestern side

Card 2/3

An Experiment in Pressure (Cont.)

93-57-7-19/22

of the bed so that the effect will be more widely distributed and the pressure more balanced, and 3) pressure maintenance should be applied to larger areas of the field so as to exploit the oil reserves more thoroughly. There are 4 figures and 1 Soviet reference.

AVAILABLE: Library of Congress

Card 3/3 1. Oil wells 2. Pressure-Maintenance

Mikhaylov A.
AUTHOR: Mikhaylov, K.F., Senior Engineer 92-58-3-9/32

TITLE: Hydraulic Fracturing of a Formation in Carpathian
Oil Fields (Gidravlicheskiy razryv plasta na promyslakh
Prikarpatiya)

PERIODICAL: Neftyanik, 1958, Nr 3, pp 9-10 (USSR)

ABSTRACT: The author states that the first attempts to fracture hydraulically productive horizons in its deep wells of the Carpathian oil fields failed because of the high permeability of the reservoir rocks. It was particularly difficult to fracture formations in wells classed as depleted. Nor was much progress made in newly drilled wells where the productive formation was 600 m thick and consisted of various hard rocks with one single matrix. The low-viscosity fracturing fluid and the insufficient number of the necessary pumping units were responsible

Card 1/3

Hydraulic Fracture of a Formation (Cont.)

92-58-3-9/32

for the failure. This led the Ukrainian drillers to the conclusion that they should use for hydraulic fracturing such viscous fluids as straight-run distillation goudron mixed with spindle oil. A mixture 55 percent goudron and 45 percent oil produced the best result. Properties of such a fluid permit the admixture of 0.8 - 1 kg of sand to every liter of liquid. This fracturing fluid is not expensive (it costs approximately 80 rubles per ton), and opens broad possibilities of pumping a considerable quantity of sand into the formation with the liquid. The Dolina oil field was the first to perform hydraulic fracturing in a well 2,300 m deep. Eight to 10 pumping units of the TsA-350 and TsA-300 type were simultaneously used for this operation. The fracturing fluid was injected into the annular space between the producing string and the 2 1/2-in stem of pump tubings inserted. At first, the bore-hole was filled with oil. Then, when the formation permeability was ascertained, 20 cu meters of fracturing viscous fluid were pumped in under 180-200 atm. pressure. Eight tons of the same fluid mixed with sand were injected thereafter.

Card 2/3

Hydraulic Fracture of a Fromation (Cont.)

92-58-3-9/32

In certain wells the formation breaking pressure was raised to 300 atm and the injection rate brought to 1.5 cu meters per minute. When the operation was completed, the oil well was left idle for 24 hours. When the pressure at the wellhead dropped to minimum, the production of oil was resumed. Due to hydraulic fracturing applied in accordance with the procedure described, a considerable number of the Dolina field deep wells almost doubled their output. Hydraulic fracturing was also successfully used in the Borislav and Bitkovo oil fields, and as a result, the recovery of crude oil in the Carpathian petroliferous area hit a new peak.

ASSOCIATION: Otdel neftyanoy i gazovoy promyshlennosti Gosplana UkrSSR (Petroleum and Gas Industry Section of the Ukrainian SSR Gosplan)

AVAILABLE: Library of Congress

Card 3/3

MIKHAYLOV, Konstantin Fedorovich; PREDTECHENSKAYA, N., red.; SHAFETA, S.,
tekhn. red.

[Manual for oil-field mechanics] Spravochnik mekhanika neftepro-
mysla. Kiev, Gos. izd-vo tekhn. lit-ry USSR, 1961. 363 p.
(MIRA 14:6)
(Oil fields--Equipment and supplies)

MIKHAYLOV, Konstantin Fedorovich; MURAV'YEV, V.M., red.; KAYESHKOVA,
S.M., ved. red.; STAROSTINA, L.D., tekhn. red.

[Technical progress in petroleum production; practices of
Ukrainian petroleum workers] Tekhnicheskii progress v dobychе
nefti; opыt neftianikov Ukrayny. Moskva, Gostoptekhizdat,
1963. 51 p. (MIRA 16:10)
(Ukraine—Petroleum production)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5

MIKHAYLOV, K.F.

Safety device for a drilling-pump manometer. Neft. i gaz. prom.
no.2:69 Ap-Je '63. (MIRA 17:11)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5"

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5

MIKHAYLOV, K.G.

Sal'sk Station. Zashch. rast et vred. i bol. 3 no.11:45-46 N
'63. (MIRA 17:3)

1. Sal'skiy punkt signalizatsii i prognozov, Rostovskaya obl.

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5"

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5

MIKHAYLOV, K.G., kand.fiziko-matematicheskikh nauk

Toward other planets. Vest.Vozd.Fl. no.7:20-24 J1 '61.
(MIRA 14:8)
(Astronautics)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5"

MIKHAYLOV, K., kand.fiz.-matem.nauk

Rockets and artificial satellites in the service of science; some
results in cosros research. Nauka i zhittia 11 no.10:18-20
'61. (MIRA 15:1)

(Rockets (Aeronautics)) (Artificial satellites)

22430 2406

26122

S/017/61/000/010/002/002

D036/D113

AUTHOR: Mikhaylov, K., Candidate of Technical Sciences, Docent

TITLE: A missile flies to its target ...

PERIODICAL: Voyennyye znaniya, no. 10, 1961, 22-24

TEXT: In this article, intended to familiarize the reader with military technique, the author explains the fundamentals of classical ballistics and how they affect accuracy of fire. He describes the factors affecting the trajectory of a nonreaction-propelled missile, i.e. the force of gravity, air resistance and the ballistic coefficient. The air resistance depends on the air density, speed of flight of the missile and its shape and cross-section (caliber), and other factors. In turn, the air density depends on temperature, atmospheric pressure, and to a very slight degree on the air humidity. The drag coefficient depends on the shape of the missile and the speed of its flight; due to the complicated calculations which would be involved, this coefficient is determined experimentally for each missile. As an example of the loss of speed of a missile flying through the air, it is stated that a shell fired 13,170 meters at an angle of elevation of 40°.

Card 1/3

26122

S/017/61/000/010/002/002

D036/D113

A missile flies to its target

from a 76-mm gun of 1942 make, has an initial speed of 680 m/sec but a final speed of only 286 m/sec. As a result of all the forces acting upon it, the shell's trajectory has the form not of a symmetrical parabola, but of an unsymmetrical curve whose descending branch is shorter and steeper than its ascending branch and whose angle of fall is greater than its quadrant angle of departure. The maximum missile flight range is achieved at angles of departure of approximately 45°. However, in firing medium - and heavy-alibre missiles with an initial speed of nearly 1000 m/sec, the quadrant elevation of maximum range trajectory appears to be more than 45°, and at an initial speed of nearly 1500 m/sec and more this angle reaches 55°. For rifle bullets, the quadrant elevation of maximum range trajectory is nearly 35°. When making ballistic calculations and compiling firing tables, the meteorological conditions are assumed to have fixed values. i.e. an air temperature of + 15°C, atmospheric pressure of 750 mm, relative humidity of 50% and still air. Deviations from these values are corrected by special graphs included in the tables. The range is strongly affected by changes of air temperature and wind, and to a much lesser degree by deviations in the weight of the missile and atmospheric pressure from the tabular values.

Card 2/3

26122

S/017/61/000/010/002/002

D036/D113

A missile flies to its target

Varying firing conditions also affect the height, time of flight and angle of fall; however, these factors are only of importance for flying targets, not for ground targets. Exterior ballistics is also concerned with accuracy of fire, which depends on the correctness of flight. The well-known Soviet artillery professors N.V. Maiyevskiy, N.A.Zabudskiy and D.A.Ventsel' have done valuable work in establishing the factors influencing correctness of flight of missiles. Correctness of flight is ensured by rifling. The rifling pitch of modern weapons varies from 15-30 calibers. In howitzers and mortars it is normally 15-20 calibers and in guns in which the initial speed of the missile is great, it is up to 30 calibers and more. As the weapons of the Soviet Army have rifling going from left to right (clockwise), the missiles have a right-hand drift, which has to be taken into account when firing. The trajectories of mortar shells are calculated in the same way as those of artillery missiles, although the stability of mortar shells in flight has to be calculated by special methods, as they are stabilized by empennages. Exterior ballistics also includes calculating the trajectories of aerial bombs and calculating aerial fire (air-to-air and air-to-surface). In conclusion, the author says that all concerned with artillery or small arms should know the fundamentals of exterior ballistics.

There are 4 figures.

Card 3/3

MIKHAYLOV, K., kand.fiz. matem.nauk

Rockets and satellites serve science. Nauka i zhyttia no.11:17.
19,21 N '61. (MIRA 14:12)
(Outer space--Exploration)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5

MIKHAYLOV, K., kand.fiziko-matem.nauk

Paths of science lead to outer space. Grazhd.av. 20 no.4:4-5
Ap '63. (MIRA 16:5)
(Outer space--Exploration)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5"

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5

MIKHAYLOV L.G.

Two fundamental boundary value problems for a general elliptic system on a plane. Dokl. AN Tadzh. SSR t. no. 2:6-9 '63.
(MIRA 17:4)

1. Otdel fiziki i matematiki AN Tadzhikskoy SSR. Predstavлено
членом-корреспондентом AN Tadzhikskoy SSR G.V. Lebrovolskim.

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5"

MIKHAYL V., L.S., nauchny. red.

[studies on boundary value problems in the theory of functions and differential equations] Issledovaniya po kraevym zadacham teorii funktsii i differenttsial'nykh uravnenij. Tashkent, AN Tadzhik. SSR, Nauka i tekhnika, 1977. 120 p.
R. Akademiyu nauk Tadzhikskoy SSR, Institute of Physics and Mathematics.

HAYLOV, K. G.
USSR/Agriculture

Card 1/1

Author : Mikhaylov, K. G. (Salsk-Rostov)

Title : Again about the seed-eating insect Tikhius

Periodical : Priroda, 5, page 116, May 1954

Abstract : Beetles of yellow Tikhius (seed eating insects) were observed feeding on potatoes and cabbage, a food most unnatural for these pests. These insects are known to feed on alfalfa exclusively. The damage to the potatoes and cabbage was not severe but considerable. Dusting with hexachlorane brought quick extermination of the insects.

Institution :

Submitted :

MIKHAYLOV, K.G.

Cutworms on corn in the Manych Steppe. Zashch. rast. ot vred. i
bol. 3 no.3:56 My-Je '58. (MIREA 11:6)

1. Zaveduyushchiy Sal'skim punktom sluzhby ucheta i prognozov.
(Rostov Province—Cutworms)
(Corn (Maize)—Diseases and pests)

MIKHAYLOV, K.G.

Collective farm organizers. Zashch.rast.ot vred.i bol. 4
no.3:14-15 My-Je '59. (MIRA 13:4)

1. Zaveduyushchiy Sal'skim punktom sluzhby ucheta i prognozov.
(Sal'sk District--Plants, Protection of)

POHOMARENKO, A.V., ispolnyayushchiy obyazannosti dotsenta; VINOGRADOV, P.V.;
starshiy nauchnyy sotrudnik; MIKHAYLOV, K.G., agronom-entomolog;
IYERUSALIMSKAYA, K.P., studentka

Controlling soil pests in checkrowed corn fields. Zashch. rast.
ot vred. i bol. 5 no.4:24-27 Ap '60. (MIRA 13:9)

1. Rostovskiy universitet (for Ponomarenko, Iyerusalimskaya).
2. Zernogradskaya selektsionnaya stantsiya (for Vinogradov).
3. Sal'skiy nablyudatel'nyy punkt (for Mikhaylov).
(Corn (Maize))—Diseases and pests)

MIKHAYLOV, K. G.

Strip placement of hexachloran in the soil. Zashch. rast. ot
vred. i bol. 5 no.5:29 My '60. (MIRA 16:1)

1. Zaveduyushchiy punktom slushby ucheta i prognozov,
Sal'skiy rayon.

(Rostov Province--Wireworms--Extermination)
(Rostov Province--Corn(Maize)--Diseases and pests)

MIKHAYLOV, K.G.

Economic effectiveness of controlling mildew. Zashch. rast.
ot vred. i bol. 6 no.10:14-15 0 '61. (MIRA 16:6)

1. Zaveduyushchiy Sal'skim punktom sluzhby uchet, i prognozov,
Rostovskaya obl.

(Rostov Province—Grapes—Diseases and pests)
(Rostov Province—Mildew)

MIKHAYLOV, K.G., agronom-entomolog

Pests and diseases of forage beans in the Sal Steppe. Zashch. rast.
ot vred. i bol. 7 no.3:15 Mr '62. (MIRA 15:11)

1. Sal'skiy nablyudatel'nyy punkt Vsesoyuznogo instituta zashchity
rasteniy. (Sal Steppe--Beans--Diseases and pests)

ASADOV, G.F.; BAGIROV, G.D.; MIKHAYLOV, K.G., agronom-entomolog

Melon fly *Myioptillardis paradalina*. Zashch. rast. ot vred. i bol.
8 no.2:25-26 F '63. (MIRA 16:7)

1. Institut zemledeliya Azerbaydzhanskoy SSR, Baku (for Asadov).
 2. Azerbaydzhanskiy institut zashchity rasteniy, Kirovabad (for Bagirov).
 3. Sal'skiy punkt sluzhby signalizatsii i progonozov Rostovskoy oblasti (for Mikhaylov).
- (Melons—Diseases and pests) (Fruit flies)

MIKHAYLOV, K.G. (Rostovskaya obl.)

Mass study in agricultural chemistry. Tashch. rast. et vred.
i bol. 9 no. 4:12 '64. (MIRA 17:5)

USSR/Farm Animals. Honey Bee

Q-6

Abs Jour : Rof Zhur . Bi-l., No 8, 1958, N. 35770

Author : Mikhaylov K.I.

Inst : Not Given

Title : The Testing of the Comb Foundation with Enlarged Cells
(Ispytaniye vishchiny s uvelichennymi yacheykami)

Orig Pub : Pchelovedstvo, 1957, No 4, 22-34

Abstract : Of 32 apiaries carrying out the testing of comb foundation in 1956, the increased productivity of the enlarged bees was observed only by 24 beekeepers. On the average, the honey crop produced by the experimental colonies was 10% more, and the number of frames built 25% higher, than in the control colonies. It was also noticed that southern bees adapt themselves better to comb foundations with 5.65 mm. cells than to those with 5.85 mm. cells.

Cord : 1/1

MIKHAYLOV, K.I.; TARANOV, G.F.

Gas exchange in the ball of wintering bees (*Apis mellifera*). Zool.
zhur. 40 no.10:1485-1494 O '61.
(MIRA 14:9)

1. Research Institute of Apiculture, Rybnoye, Ryazan Region.
(Bees) (Hibernation) (Carbon dioxide)

YANOVICH, V.A.; MEDVEDEV, P.P., spets. red.: MIKHAYLOV, K.I., red.

[Radio in military affairs] Radio v voennom dele. Moskva,
(MIRA 18:7)
DOSAAF, 1965. 55 p.

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5

KRASNOV, Vladimir Nikitich; USOL'TSEV, I.P., spets. red.;
MIKHAYLOV, K.I., red.;

[Light as a detector and light as a weapon] Svet - lokator,
svet - oruzhie. Moskva, DOSAAF, 1964. 103 p.
(MIRA 17:11)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5"

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5

MOKKOVKIN, B.A.; MIKHAYLOV, K.I., red.

[Civil defense in a village] Gражданская оборона на
селе. Мoskva, Izd-vo DGSAAF, 1964. 38 p.
(MIRA 18:1)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5"

BUMSHTEYN, S.I.; NATAROV, A.I.; MIKHAYLOV, K.I., red.

[Manual for the driver of the second class; construction, maintenance and operation of motor vehicles] Uchebnoe posobie shofera vtorogo klassa; ustroistvo, tekhnicheskoe obsluzhivanie i ekspluatatsiya avtomobilei. Moskva, DOSAAF, 1965. 495 p. (MIKA 18:5)

GETMANOV, R.; GOL'DENBERG, E.; PAVLOV, A.; YUMASHEV, N.N.,
spets. red.; MIKHAYLOV, A.I., red.

[Collection of problems on traffic regulations for
automotive transportation] Sbornik zadach po pravilam
dvizheniya avtotransporta. Moskva, Izd-vo DOSAAF,
(MIRA 18:7)
1965. 351 p.

MIKHAYLOV, K. N.

Sp...
3

Maths ✓ Oxidation-reduction polymerization. T. I. Yurchenko,
V. A. Puchin, and K. N. Mikhaylov. U.S.S.R. 104,250.
Dec. 25, 1958. Unsard. compds. are emulsion-polymerized
in the presence of solns. of Mo-CN complexes. The poly-
merization is continued until the intensely colored ac-
tivators change color. M. Horsch.

PM NK

L 4C952-66 EWT(m)/EWP(k)/EWP(t)/ETI IJP(c) JH/I HW
ACC NR: AT6024915 (A) SOURCE CODE: UR/2981/66/000/000/000/000

AUTHOR: Mikhaylov, K. N.; Ovodenko, M. B.; Archakova, Z. N.; Chernoskutov, Ye. F.;
Shvets, V. A.

1
3+1

ORG: none

TITLE: Manufacturing procedure and mechanical properties of VAD23-alloy sheets

SOURCE: Alyuminiiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye
splavy (Heat resistant and high-strength alloys), 65-69

TOPIC TAGS: aluminum alloy, copper containing alloy, lithium containing alloy,
cadmium containing alloy, manganese containing alloy, titanium containing alloy,
metal cladding, metal property/VAD23 aluminum alloy

ABSTRACT: A manufacturing procedure for rolling aluminum-clad VAD23-alloy sheets
has been developed. It is proposed that hot rolling be done in two stages. First,
the pack, a slab, and a cladding plate are welded together by rolling at 270—340C.
The prerolled packs are reheated to 450—500C and rolled into a strip in a continu-
ous mill. Nonclad sheets can be rolled in one stage at 450—500C. It was found
that the plasticity in hot rolling of the alloy is greatly affected by the copper
and lithium content. Susceptibility to cracking significantly increases when the
copper content is above 5.3% and the lithium content is above 1.2%. With this
method, sheets 0.5—5.0 mm thick were successfully rolled. Their tensile strength

Card 1/2

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CIA-RDP86-00513R001034010016-5

! 40942-6
ACC NR: AT6024915

at room temperature was 55—60 kg/mm² and elongation was 2—7%. Orig. art.
has: 5 figures.

[TD]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 002/ ATD PRESS: 5056

Card 2/2

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5"

L 46984-66 EWP(m)/EWP(t)/STI IJP(c) JH/JD
ACC NR. AT6024912 (A, N) SOURCE CODE: UR/2981/66/000/004/0037/0048

AUTHOR: Mikhaylov, K. N.; Kovrizhnykh, V. G.; Archakova, Z. N.; Baranchikov, V. M.;
Sandler, V. S.; Shvets, V. A.

4⁰
P11

ORG: none

TITLE: Preparation of pressed semifinished products from VAD23 alloy

SOURCE: Alyuminiiyevyye splavy, no. 4, 1966. Zharoprochnyye i vysokoprochnyye splavy
(Heat resistant and high-strength alloys), 37-48

TOPIC TAGS: aluminum alloy, metal pressing, solid mechanical property / VAD23 aluminum alloy

ABSTRACT: In order to determine the possible applications of VAD23 alloy, the influence of various technological factors on its mechanical properties and structure was investigated. The optimum mechanical properties were found to be produced by pressing directly from an ingot which had first undergone homogenization. The optimum pressing temperature of sections with a flange thickness of 5 mm, 470-490°C, i. e., the temperature to which the blanks are heated, insures high strength characteristics and a comparatively good plasticity over the entire length of the section. The elongation per unit length of the sections is practically independent of the pressing temperature of the alloy and of the degree of primary recrystallization. A change in the pressing rate in the range of 0.5-5.0 m/min at pressing temperatures of 250-430°C does not af-

Card 1/2

165d4-06

ACC NR: AT6024912

fect the plasticity of VAD23 alloy, and increases the strength characteristics slightly. In order to slow down the recrystallization of the structure during heating for quenching of thin sections pressed at 470-490°C, it is necessary to prepare them with an elongation coefficient of no more than 25-30. Orig. art. has: 11 figures and 5 tables.

SUB CODE: 11/ SUBM DATE: none

Card 2/2

Mikhailov, K.

(5)

Chem Abstr 48

1-25-54

Organic Chemistry

Phenylbenzophenoneacetate V. M. Rodionov, N. N. Suvorov, and K. S. Mikhailov. Akad. Nauk S.S.R. Inst. Org. Khim., Sintetichesk. Soedinenii, Sbornik 2, 162-3 (1952); cf. C.A. 46, 2702. — A mixt. of 275 g. PhCH₂CO₂H and 15 g. red P is dried several days over CaCl₂. It is then treated in a reflux app. with 200 g. dry Br, heated carefully on a steam bath while 320 g. Br is added to it with shaking, and heated 2.5 hrs. longer until Br vapors are no longer evident in the condenser. On cooling the mixt. is dilut. with 200 ml. abs. EtOH and allowed to stand overnight, then is heated 1 hr. on a steam bath. After dilut. with H₂O and salting out with NaCl, with extn. of the aq. layer with CHCl₃, the combined org. layer is filtered by suction to remove tar, washed with H₂O and 5% Na₂CO₃, dried, and distd. yielding 75% with H₂O and 5% Na₂CO₃, dried, and distd. yielding 75% PhCHBrCO₂Et, b.p. 103-4°, d₄₀ 1.380, n_D²⁰ 1.5395. G. M. Kosolapoff

MA
1-14-54

MIKHAYLOV, K.V.

SR/Chemistry - Chemical engineering

FD-879

Pub. 50 - 12/24

Author : Mikhaylov, K. V.

Title : The design of high-pressure closures

Periodical : Khim. prom., No 6, 365-368 (45-48), Sep 1954

Abstract : Reviews critically the designs of closures proposed by S. N. Ganz in an article on the same subject (Khim. prom. No 1, p 14, 1953). States that Ganz recommends self-sealing closures without bolts. Points out that the design of the packing determines the type of fastening which should be used. Reproduces Ganz's designs and discusses in detail their advantages and shortcomings. One reference, USSR, since 1940. Four figures.

Institution : State Institute of the Nitrogen Industry

Submitted :

MIKHAYLOV, K.V.

High-pressure apparatus in the nitrogen industry. Khim.manka i
prom. l no.6:692-696 '56. (MIRA 10:3)
(Nitrogen industries) (Chemical engineering--Apparatus and
supplies)

MIKHAYLOV, K.V., kandidat tekhnicheskikh nauk.

Fire and heat resistant reinforced concrete construction with simplified reinforcements. Stroi.prom.31 no.26-28 D '53. (MLR 7:1)
(Reinforced concrete construction)

MIKHAYLOV, K. V.
PASTERNAK, P.L., professor, doktor tekhnicheskikh nauk; AVAKOV, A.I.,
kandidat tekhnicheskikh nauk; BERDICHESKIY, G.I., kandidat
tekhnicheskikh nauk; MIKHAYLOV, K.V., kandidat tekhnicheskikh
nauk; MEDVEDEV, L.Ya., tekhnicheskiy redaktor; TUMARKIN, D.M.,
inzhener, redaktor

[Prefabricated roofs made of prestressed composite girders and
panels for industrial buildings] Sbornye pokrytiia promyshlennyykh
zdanii iz predvaritel'no napriazhennykh balok i panelei kompleksnoi
konstruktsii. Moskva, Gos. izd-vo lit-sry po stroitel'stvu i arkhi-
tekture, 1954. 63 p.
(Roofs) (Concrete, Prestressed)

KHAYLOV, K.V.

VEKSMAN, A.M., inzhener; BERDICHESKII, G.I., kandidat tekhnicheskikh nauk; MIKHAYLOV, K.V., knadidat tekhnicheskikh nauk.

Use of prefabricated prestressed girders and large panels in floors of industrial buildings. Stroi.prom. 32 no.8:11-18 Ag '54.(MIRA 7:8)
(Floors, Concrete) (Precast concrete construction)

PASTERNAK, P. L., doktor tekhnicheskikh nauk, professor, rukovoditel';

MIKHAYLOV, K. V., kandidat tekhnicheskikh nauk; HERDICHESKII, G. I.,
kandidat tekhnicheskikh nauk.

Panels of complex design for heated beamless floors of industrial
buildings developed by the Scientific Research Institute of Con-
struction. Rats. i izobr. predl. v stroi. no.81:13-17 '54.
(Floors, Concrete) (MLRA 8:6)

PASTERNAK, P. L., professor, doktor tekhnicheskikh nauk, rukovoditel'.

BEDICHEVSKIY, G. I., kandidat tekhnicheskikh nauk; AVAKOV, A. I.,
kandidat tekhnicheskikh nauk; MIKHAYLOV, K. V., kandidat tekhnicheskikh nauk

Prestressed reinforced concrete beams developed by the Scientific Research Institute of Construction. Rats. i izobr. predl. v stroi.
no. 81:23-25 '54. (MIRA 8:6)

(Girders) (Concrete, Prestressed)

MIKHAYLOV, K.V., kandidat tekhnicheskikh nauk, redaktor; TUMARKIN, D.M.,
redaktor; PERSON, M.N., tekhnicheskiy redaktor

[Use of assembled reinforced concrete construction in industrial
building] Primenenie sbornykh zhelezobetonnykh konstruktsii v
promyshlennom stroitel'stve. Moskva, Gos.izd-vo lit-ry po stroitel'-
stvu i arkhitekture, 1955. 185 p. (MIRA 9:3)

1. Nauchno-tekhnicheskoye obshchestvo stroitel'noy promyshlennosti.
(Reinforced concrete construction)

MIKHAYLOV, K.V., kandidat tekhnicheskikh nauk; KALATUROV, B.A., kandidat
tekhnicheskikh nauk

Conference on prestressed reinforced concrete construction in
Czechoslovakia. Bet.izhel.-bet. no.5:191-192 Ag '55.
(MIRA 8:9)
(Czechoslovakia--Concrete, Prestressed)

KALATUROV, B.A., kandidat tekhnicheskikh nauk; MIKHAYLOV, K.V., kandidat
tekhnicheskikh nauk.

Use of bundle reinforcements in prestressed reinforced concrete
construction in Czechoslovakia. Bet. i zhel.-bet. no.8:298-302 N'55.
(MIRA 9:1)
(Czechoslovakia--Reinforced concrete construction)

BERDICHESKII, G.I., kandidat tekhnicheskikh nauk; MIKHAYLOV, K.V.,
kandidat tekhnicheskikh nauk.

Calculating construction elements made with hardened steel rein-
forcements. Stroi. prom. 44 no.5:36-40 My '55. (MLRA 8:6)
(Reinforced concrete)

1A/10266, A.L.
ARONCHIK, Bentsion Davidovich, inzh.; MIKHAYLOV, K.Y., kand.tekhn.nauk,
nauchnyy red.; BERDICHEVSKIY, G.I., kand.tekhn.nauk, red.izd-va;
PERSON, M.N., tekhn.red.

[Nomographs for calculating cross sections of structural elements
in concrete and reinforced concrete construction] Nomogrammy dlia
rascheta sechenii elementov betonnykh i zhelezobetonnykh konstruk-
tsii. Moskva, Gosstroizdat, 1958. 91 p. (MIRA 11:6)
(Concrete construction)

97-58-1-3/12

AUTHOR: Mikhaylov, K.V. Candidate of Mechanical Science.
Basevich, T. Candidate of Mechanical Science.

TITLE: Magnitude of the Coefficient of Working Conditions for
Reinforced Concrete Constructions. (O velichine koeffitsiyenta
usloviy raboty dlya naklypanyya armatury zhelezobetonnykh
konstruktsiy.)

PERIODICAL: Beton i Zhelezobeton. 1958. No. 1 USSR Pp 13-19

ABSTRACT: The calculation of the strength of bent elements reinforced with cold rolled steel is given and it was investigated to the point of breaking. Formulae are presented and values for reinforcement are taken from norms NiTU 123-55. For tensioned reinforcement hot rolled steel Mark St. 5 is advocated. The coefficient of working capacity of reinforcement is introduced into the calculations. G.I. Berdichevskiy and K.V. Mikhaylov in the article on the calculation of constructions with a high tensile reinforcement published in 'Stroitel'naya Promyshlennost' 1955 No. 5 deals with this calculation. Special tests were carried out in the laboratories for reinforced concrete constructions TsNIPS to define the magnitude of the coefficient of working conditions of high tensile reinforcement. Figure 1 shows

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Magnitude of the Coefficient of Working Conditions for Reinforced Concrete Constructions.

the average working diagrams of high tensile steel. High tensile hot rolled reinforcement of standard profile Mark St.5 was used for the tests. Figure 2 shows the relationship between the degree of hardening during tensioning and the residual uniform elongation Tests of the load carrying capacity and properties at breaking point of bent reinforced concrete elements reinforced by hardened steel were carried out. A test sample of a beam is illustrated in Figure 3. The concrete used for these samples was Mark 200. Results of testing the strength of these beams are given in Table 1 It was found that the calculation of the strength of bent elements is based on given formulae and takes into account breaking values of the reinforcement and also that the way in which the beam breaks depends on the value of the uniform elongation of the tensioned reinforcement. Figure 4 shows a curve of relative load carrying capacity of tested beams reinforced with hot rolled reinforcement subjected to tensioning. Figure 5 a similar curve but for cold rolled and flattened reinforcement of standard profile and cold rolled thermally untreated reinforcement. Figure 6 is a diagram

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97-58-1-3/12

Magnitude of the Coefficient of Working Conditions for Reinforced Concrete Constructions.

of the effect of the magnitude of the coefficient of working conditions of the reinforcement of bent elements on the crushing moment. The characteristic of the working diagram of the reinforcement is correlated to the curve of the load carrying capacity of the beam. Figure 7 shows the relationship between the curve of the load bearing capacity of bent reinforced elements and the diagram of the tensioned reinforcement. The coefficient of the working conditions depends on the value of the crushing moment. Figure 8 shows the curve of maximum deflection of beams at breaking moment and Figure 9 gives practical and theoretical deformations of reinforcement. There are 9 Figures and 2 Tables.

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- 1. Reinforced concrete--Properties
- 2. Reinforcing steel--Mechanical properties
- 3. Reinforcing steel--Test methods
- 4. Structures--Stability

S-N/57-53-9-2/13

AUTHORS: Berdichevskiy, G.I., Mistaylov, K.V., Candidates of Technical Sciences and Yakushin, V.P., Engineer.

TITLE: Pre-cast Pre-stressed Reinforced Concrete Roof Trusses for Industrial Buildings Manufactured by the Method of Vibro-stamping ((Precvaritelnno napryazhennyye zhelezobetonnyye balki pokrytyiy promyschlennyykh zdaniy, izgotovlyayemyye s primeneniem vibrostampovaniya)

PERIODICAL: Beton i Zheleznobeton, 1983, Nr 5, pp 323 - 329 (USSR)

ABSTRACT: Results of investigations regarding the reliability of the construction of described trusses as far as strength against crack formation is concerned. It was established that for multi-bay constructions, low-alloy steel of non-periodical profile of 30 mm Mark 30KhG2S could be used, as well as self-tensioning fixing. In the case of trusses with batch reinforcement, a sample construction of half-trusses was designed, an allowance for welded joint being made. Batches of steel wires (7 wires) of 5 mm diameter were bent up 2 m from the end of the truss and splayed in a fan-shape by which considerable simplification of casting was achieved, without losing strength. The bending of the tensioned reinforcement from the lower flange into the wall of the web (fan shape) was carried.

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Pre-cast Pre-stressed Reinforced Concrete Roof Trusses for Industrial Buildings Manufactured by the Method of Vibro-stamping

out by simple methods. Cracks appearing in the top flange of the truss, when the tensioning of the reinforcement ceases, are not detrimental to the load-bearing capacity of the truss. Tests also showed that it is possible to omit tensioning in the top flange. Investigations showed that trusses of 24 m span proved successful and economical when horizontally cast and when vibro-stamping is applied, in comparison with the old method of vertical casting. The vibro-stamping installation allows mechanisation of consolidation of the concrete mix; it is simple in construction and could be made in local factories. Laboratories of the NIIZhB Asia SSSR working on pre-cast pre-stressed reinforced concrete constructions and the theory of reinforced concrete and reinforcement developed and tested in 1956-1957 a method of vibro-stamping of pre-stressed reinforced concrete roof trusses in horizontal position. Two trusses of 24 m span were tested to breaking point; one was reinforced with low-alloy steel batch reinforcement of non-periodical profile Mark 30KhG2S and the other reinforced by high-tensile reinforcement of standard

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SOV/97-58-9-2/13

Pre-cast Pre-stressed Reinforced Concrete Roof Trusses for Industrial Buildings Manufactured by the Method of Vibro-stamping

profile (Figure 1). The trusses were calculated for a load of 380 kg/m^2 , with rafters placed 6 m apart. Structural Engineers A. Al'tshuler and Ye. Spektor collaborated in constructing the prototype of the truss. The section of the truss is in the shape of an "I", is 2 000 mm high in the middle, tapering down to 1 000 mm at the end (1:12). The width of the top flange is 450 mm. The bottom flange is 120 x 220 mm in cross-section with the top splayed. The truss was designed in two halves reinforced by pre-stressed batch reinforcement and joining of the two halves of the truss is made by welding together two steel plates, 25 mm thick. The reinforcement of the web and the top flange is of steel Mark 25G2S. The reinforcement of the bottom flange consists of four rods each 28 mm in diameter, stressed to $6 500 \text{ kg/cm}^2$ (the limit of strength of the steel is $10 000 \text{ kg/cm}^2$). Figure 2 illustrates positions of the reinforcement of trusses.

Figure 3: the tensioning of the reinforcement and -

Figure 4: completed reinforcement of the truss using rod reinforcement. Table 1 gives values for various materials

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Pre-cast Pre-stressed Reinforced Concrete Roof Trusses for
Industrial Buildings Manufactured by the Method of Vibro-stamping

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used in trusses of different makes, e.g. Promstroyproekt, Giprotis and GPI-1. Figure 5 illustrates anchor fortensioning of reinforcement type "Promstal'konstruktsiya". Figure 6 shows vibrating lids, 6 m long, with 6-7 vibrators I-117. The finished truss, ready for testing, is illustrated in Figure 7. Details of the welded joint is given in Figure 8. Figure 9: distribution of cracks in the truss reinforced with batch reinforcement under the load immediately prior to collapse and Figure 10 illustrates the same, but with alternative rod reinforcement. The deflection of trusses in the middle of the span is shown in the graph (Figure 11). Results of tests carried out are given in Table 2. There are 11 figures and 2 tables.

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KIKHAYLOV, K.V., kand.tekhn.nauk; KOCHETOV, A.I., inzh.; KHAVIN, B.N.,
red.izd-va; VORONIN, K.M., tekhn.red.

[Provisional instructions for a method of testing the tension
of high-strength reinforcement wire and wire rods] Vremennye
ukazaniia po metodike ispytaniia na rastiazhenie vysokoprochnoi
armatury iz provoloki i katanki. Moskva, Gos.izd-vo lit-ry po
stroit., arkhit. i stroit.materialam, 1959. 24 p. (MIRA 12:7)

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut betona
i zhelezobetona, Perovo.
(Wire--Testing) (Reinforced concrete construction)

BERDICHEVSKIY, G.I., kand.tekhn.nauk; DMITRIYEV, S.A., kand.tekhn.nauk;
MIKHAYLOV, K.V., kand.tekhn.nauk; GOZOZDEV, A.A., prof., doktor
tekhn.nauk; MIKHAYLOV, V.V., prof., doktor tekhn.nauk; BULGAKOV,
V.S., kand.tekhn.nauk; VASIL'YEV, A.P., kand.tekhn.nauk; YEVGEN'YEV,
I.Ye., kand.tekhn.nauk; MULIN, N.M., kand.tekhn.nauk; SVETOV, A.A.,
kand.tekhn.nauk; FRENKEL', I.M., kand.tekhn.nauk; BELOBROV, I.K.,
inzh.; MATKOV, N.G., inzh.; MITNIK, G.S., inzh.; SELYAR, B.L., inzh.;
SHILOV, Ye.V., inzh.; MASENKO, I.D., inzh.; NIZHNICHENKO, I.P., inzh.;
FILIPPOVA, G.P., inzh.; MIZERINYUK, B.N., kand.tekhn.nauk; SHEYNFEL'D,
N.M., kand.tekhn.nauk; BALAT'YEV, P.K., kand.tekhn.nauk; BARBARASH,
I.P., kand.tekhn.nauk; MITGARTS, L.B., kand.tekhn.nauk; SHIFRIN, M.A.,
kand.tekhn.nauk; PETROVA, V.V., red.izd-va; TEMKINA, Ye.L., tekhn.red.

[Temporary instruction on the technology of making prestressed re-inforced concrete construction elements] Vremennaja instruktsija po
tekhnologii izgotovlenija predvaritel'no napriazhennykh zhelezobetonykh konstrukcij. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i
stroit.materialam, 1959. 255 p. (MIRA 12:12)

(Continued on next card)

BERDICHEVSKIY, G.I.---(continued) Card 2.

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut betona i zhelezobetona, Perovo. 2. Nauchno-issledovatel'skiy institut betona i zhelezobetona Akademii stroitel'stva i arkhitektury SSSR (for Gvozdev, V.V.Mikhaylov, Berdichevskiy, Bulgakov, Vasil'yev, Dmitriyev, Yevgen'yev, K.V.Mikhaylov, Mulin, Svetov, Frenkel', Belobrov, Matkov, Mitnik, Sklyar, Shilov). 3. Nauchno-issledovatel'skiy institut organizatsii, mekhanizatsii i tekhnicheskoi Akademii stroitel'stva i arkhitektury SSSR (for Masenko, Nizhnichenko, Filippova, Mizernyuk, Sheynfel'd). 4. Nauchno-issledovatel'skiy institut Glavmospromstroymaterialov (for Balat'yev, Barberash). 5. Nauchno-issledovatel'skiy institut po stroitel'stvu Minstroya RSFSR (for Mitgarts, Shifrin). 6. Deyatel'nyye chleny Akademii stroitel'stva i arkhitektury SSSR (for Gvozdev, V.V.Mikhaylov).

(Prestressed concrete)

BERDICHIEVSKIY, G.I., kand.tekhn.nauk; MIKHAYLOV, K.V., kand.tekhn.nauk

"Prestressed reinforced concrete construction" by V.Kherberg. Re-reviewed by G.I.Berdichevskii, K.V.Mikhailov. Bet. i zhel.-bet. no.2: 95-96 F '59.

(MIBA 12:3)

(Prestressed concrete construction)
(Kherberg, V.)

SVETOV, Andrey Andreyevich, kand.tekhn.nauk; MIKHAYLOV, K.V., kand.
tekhn.nauk, nauchnyy red.; KADANER, N.I., red.izd-vs; TEMKINA,
Ye.L., tekhn.red.

[Prestressed reinforced concrete ties] Predvaritel'no napriazhennye
zhelezobetonnye shpal'y. Moskva, Gos.izd-vo lit-ry po stroit.,
arkhit. i stroit.materialam, 1960. 106 p. (MIRA 13:7)
(Railroads--Ties, Concrete)

BOGIN, Naum Mordukhovich, kand.tekhn.nauk; DMITRIYEV, S.A., kand.tekhn.
nauk, retsenzent; MIKHAYLOV, K.V., kand.tekhn.nauk, nauchnyy red.;
KUZNETSOVA, M.N., red.izd-va; SHERSTNEVA, N.V., tekhn.red.

[Technology of prestressed reinforced concrete] Tekhnologija pred-
varitel'no napriashennogo zhelezobetona. Moskva, Gos.izd-vo lit-ry
po stroit., arkhit. i stroit.materiam, 1960. 330 p.
(Prestressed concrete) (MIRA 13:9)

82196

S/097/60/000/03/01/003

15.3200

AUTHORS: Gvozdev, A.A., Professor, Doctor of Technical Sciences, Mikhaylov,
K.V., Nikula, I., Candidates of Technical Sciences

TITLE: Glass-Reinforced Plastics for Reinforcing of Concrete StructuresPERIODICAL: Beton i Zhelezobeton 1960, No. 3, pp. 105 - 111

TEXT: The article deals with the latest development in the field of reinforced concrete, consisting in the employment of non-metal reinforcing material on the basis of fiber-glass. The idea was first expressed by architect A.K. Burcov in 1941; since that time extensive research work has been done in the USSR and abroad. Scientists have come to the conclusion, that fiber-glass alone is unsuitable as reinforcement; it can be used, however, in the shape of bars with plastic binders; for better adhesion fiber-glass is treated with silicohydride combinations (silanes). From 1958 to this date special investigations were conducted by the Institute of Concrete and Reinforced Concrete of the ASIA of the USSR. For reinforcing material strips of glass veneer sheets of the Leningradsky zavod sloistykh plastikov (Leningrad Laminated Plastics Plant) were used. This veneer contained about 67% of fiber-glass by weight, and 40% by volume. The tensile strength of the fiber-glass of non-alkaline composition 14.16 μ in

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Glass-Reinforced Plastics for Reinforcing of Concrete Structures

diameter is given as being 8,000-9,000 kg/cm² (in the air). The same fiber-glass, but calcium-chloride-dried, increases in tensile strength to 13,500-15,000 kg/cm². The arithmetic mean value of tensile strength of glass veneer strips is equal to 11,750 kg/cm², in accordance with tests conducted on 150 samples of strips 50-70 cm long. The article gives a formula which shows to what extent the tensile strength depends upon the duration of stress being applied. At a given time the tensile strength has decreased by 35%. Tests have shown that after 10 hours of stress application the coefficient of decrease of tensile strength is 0.7. Tensile strength of fiber-glass is known to depend upon the medium in which it is situated. In this connection tests were conducted in different media, which are characteristic of the process of concrete production. In using Ca(OH)₂ which is similar to the action of concrete on reinforcement, it appeared that alkali and water have little effect on the tensile strength of fiber-glass veneer, reducing it by 7-8%. The reaction to high temperature was unfavorable, proving that steaming or autoclave treatment are prohibitive for fiber-glass reinforcement. Tests have shown that in using fiber-glass veneer, it is necessary to allow for reduction in tensile strength up to 40% of the initial nominal strength. Tests were also performed to determine the development of deformation of fiber-glass veneer under brief and long-lasting load. It can be seen that the ratio

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Glass-Reinforced Plastics for Reinforcing of Concrete Structures

between the plastic part of the deformation and the final one remains an almost constant value until the breaking point. Tests which consisted in pulling out fiber-glass veneer strips 10-15 cm long from the concrete revealed that the average value of tensile strength of adhesion does not exceed 10 kg/cm². The pulling effort on the strips did not extend to a greater depth than 6-7 cm. Due to the low module of elasticity of glass reinforcing plastics, the summary losses of tension due to creeping and shrinkage of concrete did not exceed 5-6% as compared to 15-20% in case of high-grade wire. Table 2 shows the results of tensile strength and crack resistance tests performed on 15 concrete bars 70x200 cm long, reinforced with glass plastics. The results of the tests agree with the calculated theoretical values, which proves that in designing glass plastics reinforced concrete it is possible to use the calculating device of instruction CH 10-57 (SN 10-57). It is economically justifiable to employ glass-plastics reinforcement, when for technical considerations it is not possible to use steel reinforcement. A great deal of research work is yet to be done, until glass plastics reinforcement can compete with steel reinforcement. The Institute of Concrete and Reinforced Concrete of ASIA USSR

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Glass-Reinforced Plastics for Reinforcing of Concrete Structures

YuzhNII KhILKS, Institut stroyitel'stva i arkhitektury AN BSSR (Institute of Construction and Architecture) and others are engaged in further development work. There are 4 photographs, 8 graphs, 4 tables and 1 Soviet reference.

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S/097/60/000/008/004/008/XX
A053/A026

AUTHOR: Mikhaylov, K.V., Candidate of Technical Sciences

TITLE: Prestressed Concrete Beams Reinforced with Wires of Different Plasticity

PERIODICAL: Beton i Zhelezo-Beton, 1960, No. 8, pp. 358 - 362

TEXT: The high-grade wire used for prestressed reinforced concrete structures, has a small relative elongation after breaking, about 2 - 3% on the basis of 100 mm. For this reason structures reinforced with cold-drawn wire are calculated with the lowest coefficient of working conditions, which is 0.7, i.e., the actual tensile strength is reduced by 30%. Investigations carried out in IZhMM (TsNII) by I.A. Yukhvets, Candidate of Technical Sciences, established that by certain ways of low-temperature hardening of high-grade wire its elastic plastic properties can be improved. The thermal treatment at 350 - 450°C lasts 10 - 20 seconds and constitutes the last operation in the production of cold-drawn wire. While the elastic properties improve, the tensile strength slightly weakens. Testing the breaking point of the tempered wire revealed that the even elongation of the reinforcement exceeds 3%. In accordance with available data the limit of

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A053/A026

Prestressed Concrete Beams Reinforced with Wires of Different Plasticity

deformation for concrete under compression in bending is from 2.5 - 6 mm per running meter. Complete elastic deformation of high grade wire constitutes 0.7 - 1%, of which about half is taken up by prestressing; consequently 0.3 - 0.5% of deformation remains in reserve as residual strain. In order to ascertain under what conditions and to what extent higher plasticity of tempered wire is profitable, a number of static tests were conducted in NIIZhB by the author in cooperation with F.M. Gorodnitzkiy and N.Ya. Briskin. Tests on several series of prestressed reinforced concrete beams were performed until rupture or caving-in of the beam to about 1/25 of the calculated span. Theoretical and actual values of bending moments at the point of forming cracks showed practically no difference. This proves that the utilization of tempered wire with greater elongation widens the range of application of reinforced concrete structures subject to bending strain. In determining the character of destruction of a bending structural element, the breaking strain (limit of deformation) of concrete under compression is of prime importance. In calculations the limit of relative deformation of concrete under compression in bending is equal to 4×10^{-3} . The author concludes that in utilizing high-grade wire with a residual even elongation not less than 3%, the majority of prestressed reinforced concrete structures will give way under

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A053/A026

Prestressed Concrete Beams Reinforced with Wires of Different Plasticity

concrete compression without rupture of the reinforcement. Sagging and opening of cracks will be the visible signs preceding imminent collapse of the structure. For structures reinforced with such wire the coefficient of working conditions can be raised from 0.7 to 0.85, which corresponds with lowering the consumption of steel reinforcement to the extent of 20%. Limiting the coefficient of working conditions to 0.85 is a precautionary measure, pending further investigations and more complete information. The values of the coefficient of working conditions of reinforcement in prestressed structures should be determined with due differentiation depending upon the value of the relative height of the compressed zone and the plastic properties of the reinforcement (see enclosed Table). It is recommendable to submit all high-grade wire to low-temperature tempering in order to increase plasticity to the desired point (residual even elongation exceeding 3%), ensuring at the same time more homogeneous elongation of merchant properties of the wire. There are 5 tables and 6 figures

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AC53/A026

Prestressed Concrete Beams Reinforced with Wires of Different Plasticity

Table 5. Calculated values for coefficient of working conditions of high grade wire reinforcement.

Type of wire	Minimum values of relative even elongation	Relative height of compressed zone at point of rupture				
		0.05-	0.11-	0.21-	0.31-	0.41-
		0.10	0.20	0.30	0.30	0.40
As per ГОСТ (ГОСТ) 7348-55						
as per ЧМТУ (ЧМТУ) 4987-55	1.0	0.75	0.79	0.76	0.85	0.95
As per ГОСТ (ГОСТ) 8480-57	3.0	0.75	0.46	0.45	0.50	0.55

Card 4/4

MIKHAYLOV, K.V., kand.tekhn.nauk

Values for the coefficient of homogeneity of the strength limit for
cold-drawn low-carbon wire. Trudy NIIZHB no. 17:68-80 '60.
(MIRA 14:4)

(Concrete reinforcement)

MIKHAYLOV, K.V., kand.tekhn.nauk; TSAY SHAO-KHUIAY [TS'ai Shao-huai]

Study of seven-strand wires as reinforcement for prestressed
reinforced concrete items. Trudy NIIZHB no. 17:81-118 '60.
(MIRA 14:4)
(Concrete reinforcement) (Prestressed concrete)

MIKHAYLOV, K.V., kand.tekhn.nauk

Corrosion of wire reinforcement in a bridge span structure.
Transp.stroi. 10 no.3:59 Mr '60. (MIRA 13:6)
(Tisza River--Bridges, Concrete)
(Corrosion and anticorrosives)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5

MIKHAYLOV, K.V., kand.tekhn.nauk; GOROLNITSKIY, F.M., inzh.

Study of the strength of reinforcement made of high-strength
cold-drawn wire. Trudy NIIZHB no.23:26-57 '61. (MIRA 14:12)
(Concrete reinforcement)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5"

BERDICHEVSKIY, G.I., kand.tekhn.nauk; MIKHAYLOV, K.V., kand.tekhn.nauk;
YAKUSHIN, V.A., inzh.

Study of prestressed reinforced concrete beams manufactured
horizontally for roofs of industrial buildings. Trudy NIIZHB
no.24:5-60 '61. (MIRA 15:5)
(Beams and girders) (Roofing, Concrete)

MIKHAYLOV, K.V., kand.tekhn.nauk

Prospects for the use of cold-drawn low-carbon wire for
the reinforcement of concrete. Stal' 21 no.12.1132-1133 D
'61. (MIRA 14.12.)

(Concrete reinforcement)
(Wire drawing)

Mikhaylov, K.V.

FRENKEL', I.M., kand. tekhn. nauk; MIRONOV, S.A., doktor tekhn. nauk, prof.; BARANOV, A.T., kand. tekhr. nauk; BUZHEVICH, G.A., kand. tekhn. nauk; MIKHAYLOV, K.V., kand. tekhn. nauk; MULIN, N.M., kand. tekhn. nauk; KHAYLUKOV, G.K., kand. tekhn. nauk; KORNEV, N.A., kand. tekhn. nauk; TESLER, F.A., kand. tekhn. nauk; HERDICHEVSKIY, G.I., kand. tekhr. nauk; VASIL'YEV, A.P., kand. tekhn. nauk; LYUDKOVSKIY, I.G., kand. tekhn. nauk; SVETOV, A.A., kand. tekhn. nauk; CHINENKOV, Yu.V., kand. tekhn. nauk; BELOBROVYY, .K., inzh.; KLEVTSOV, V.A., inzh.; DOBROMYSLOV, N.S., arkh.; DESOV, A.Ye., doktor tekhn. nauk, prof.; LITVER, S.L., kand. tekhn. nauk; PISHCHIK, M.A., inzh.; SKLYAR, B.L., inzh.; POPOV, A.P., kand. tekhn. nauk; NEKRASOV, K.D., doktor tekhn. nauk, prof.; MILOVANOV, A.F., kand. tekhn. nauk; TAL', K.E., kand. tekhn. nauk; KALATUROV, B.A., kand. tekhn. nauk; KARTASHOV, K.N., red.; MAKARICHEV, V.V., kand. tekhn. nauk, red.; YAKUSHEV, A.A., inzh., nauchnyy red.; BEGA, B.A., red. izd-va; NAUMOVA, G.D., tekhn. red.

[Reinforced concrete products; present state and prospects for development] Zhelezobetonnye konstruktsii; sostoianie i perspektivy razvitiia. Pod obshchei red. K.N. Kartashova i V.V. Makaricheva. Moskva, Gosstroizdat, 1962. 279 p.
(MIRA 15:8)

(Continued on next card)

FRENKEL', I.M.---(continued) Card 2.

1. Akademiya stroitel'stva i arkhitektury SSSR. Institut betona i zhelezobetona, Perovo. 2. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Kartashov). 3. Chlen-korrespondent Akademii stroitel'stva i arkhitektury SSSR (for Mironov).
4. Gosudarstvennyy institut tipovogo proyektirovaniya i tekhnicheskikh issledovaniy (for Berdichevskiy, Vasil'yev, Lyudkovskiy, Svetov, Chinencov, Belobrovyy, Klevtsov, Dobromyslov). 4. Vsesoyuznyy gosudarstvennyy proyektno-konstruktorskiy institut (for Desov, Litver, Pishchik).

(Precast concrete)

MIKHAYLOV, K.V., kand.tekhn.nauk; MULIN, N.M., kand.tekhn.nauk

Effective reinforcing steel. Bet. i zhel.-bet. no.l:7-11 Ja
'62. (MIRA 15:4)
(Concrete reinforcement)

MIKHAYLOV, K.V., kand.tekhn.nauk; GAO BO-YAN [Kao Po-yang]

Study of the rheological characteristics of seven-wire strands.
Trudy NIIZhB no.26:204-230 '62. (MIRA 15:7)
(Concrete reinforcement--Testing)

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CIA-RDP86-00513R001034010016-5

MIKHAYLOV, K.V., kand.tekhn.nauk

Use of non-metallic reinforcement in mesh-reinforced concrete
elements. Izv.ASIA 4 no.445-49 '62. (MIRA 16:1)
(Glass fibers) (Concrete reinforcement)

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CIA-RDP86-00513R001034010016-5"

MIKHAYLOV, K.V., kand.tekhn.nauk; KRICHESKAYA, E.A., inzh.

Effect of high temperatures on stress relaxation in high-strength
wire. Bet. i zhel.-bet. 9 no.2:64-68 F '63. (MIRA 16:5)
(Concrete reinforcement—Testing)

TAL', K.E., kand. tekhn. nauk; LESSIG, N.N., kand. tekhn. nauk; Prinimali
uchastiye: GVOZDEV, A.A.; ALEKSANDROVSKIY, S.V.; BORISHANSKIY,
M.S.; DMITRIYEV, S.A.; KRILOV, S.M.; MIKHAYLOV, K.V.; MULIN, N.M.;
NEMIROVSKIY, Ya.M.; CHISTYAKOV, Ye.A.; VASIL'YEV, B.F.; BOGAT'KIN,
I.L.; ZALESOV, A.S.; NIKITIN, I.K.

New standards SNiP II-V. 1-62 for the design of concrete and
reinforced concrete elements. Bet. i zhel.-bet. 9 no. 3: 97-102
Mr. '63.
(MIRA 16:4)

1. Nauchno-issledovatel'skiy institut betona i zhelezobetona
Akademii stroitel'stva i arkhitektury SSSR (for all except
Vasil'yev, Bogatkin, Zalesov, Nikitin). 2. Gosudarstvennyy
institut tipovogo proyektirovaniya i tekhnicheskikh issledovaniy
(for Vasil'yev, Bogatkin, Zalesov, Nikitin).

MIKHAYLOV, Konstantin Vasil'yevich, kand. tekhn. nauk; GLEZAIKOVA,
I.L., red.

[Wire reinforcement for prestressed reinforced concrete]
Provolochnaia armatura dlia predvaritei'no napriazhennogo
zhelezobetona. Moskva, Stroiizdat, 1964. 189 p.
(MIRA 17:6)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5

MIKHAYLOV, K.V., kand. tekhn. nauk, red.; KUZNETSOVA, M.N., red.

[New kinds of reinforcements] Novye vidy armatury. Mo-
skva, Stroizdat, 1964. 202 p. (MIRA 17:4)

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CIA-RDP86-00513R001034010016-5"

L 55084-65 EWT(d)/EPA(s)-2/ENT(m)/EWP(w)/EPF(c)/ENG(s)-2/EWP(v)/EPR/T/
EWP(j)/EWP(k)/EWA(h) Po-4/Pf-4/Pr-4/Ps-4/Pt-7/Peb/Pw-4 WW/EM/RM

ACCESSION NR: AP5018103

UR/0097/64/000/009/0412/0416

AUTHOR: Mikhaylov, K. V. (Candidate of technical sciences); Popov, A. N.
(Candidate of technical sciences); Rustovoytov, V. P. (Engineer)

54

g

TITLE: Concrete pressure pipes with continuous fibreglass reinforcement

SOURCE: Beton i zhelezobeton, no. 9, 1964, 412-416

16

TOPIC TAGS: reinforced concrete, pipe, fiberglass

ABSTRACT: Several years ago the Scientific Research Institute of Reinforced Concrete of Gosstroy, USSR, together with the Khar'kov Institute of Municipal Construction Engineers, organized investigations of the development of technology and determination of the behavior under load of concrete pressure pipes, in which a steel-shell reinforcement was replaced by fibreglass filaments combined with synthetic resin. The results of these investigations are presented in the present article. The delivery pipe with continuous fibreglass reinforcement consists of a reinforced concrete core prestressed longitudinally, and a fibreglass shell.

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L 55084-65

ACCESSION NR: AP5018103

The shell is formed by winding onto this core several layers of prestressed fibreglass reinforcement in the form of tape. To join the separate turns of tape and to ensure joint action of the fibreglass shell and core, a synthetic binder is used, which can be epoxy, phenol-formaldehyde, polyester, etc., resin.

The following conclusions are made by the authors. In a series of cases it is possible to replace steel wire with fibreglass reinforcement in the production of reinforced concrete delivery pipes, which is expedient when pipes are laid in ground with a high saturation of stray currents and chemically active corrosive salts. This is because fibreglass, under certain conditions, does not deteriorate under these conditions.

Orig. art. has: 7 figures, 1 graph, 1 table.

ASSOCIATION: none

SUBMITTED: 00

MR REF Sov: 000

ENCL: 00
OTHER: 000

SUB CODE: MT
JPRS

Card 2/2

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CIA-RDP86-00513R001034010016-5

~~SECRET~~

Conference on Power Economy and Increasing the Output Factors.
Elektroenergetika (Electric Power), "1981: 1st."

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5"

MIKHAYLOV, K.

Electric motor designed by engineer Stovbunenko. NTO no.7:
30-31 Jy '59. (MIRA 12:11)
(Electric motors)

"APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5

MIKHAYLOV, K.

Two plants are competing. Sov. profsoiuzy 7 no.12:44 Je .
(MIRA 12:9)
(Electric industry workers)

APPROVED FOR RELEASE: 07/12/2001

CIA-RDP86-00513R001034010016-5"

MIKHAYLOV, K.Ya., inzh.

Use of new communication equipment in electric power systems.
Trudy VNII no.12:30-38 '61. (MIRA 18:4)

1. Vsesoyuznyy gosudarstvennyy proyektnyy institut stroitel'stva
elektrostantsiy.